

SALIENT CHARACTERISTICS

OSCILLOGRAPHIC RECORDER

RD0MN-B

- 1.0 GENERAL This procurement requires a high performance two-channel oscillographic recorder with input ranges from 1.0 mV/division to 5.0 V/division in a 1, 2, 5 sequence.
- 2.0 CLASSIFICATION The equipment shall meet the requirements of MIL-T-28800D, Type III, Class 5, Style E, Color R for Navy shipboard, submarine, and shore applications with the following modifications and exceptions:
- a. The non-operating temperature requirement is limited to the range of -40°C to +70°C.
 - b. The relative humidity requirement is limited to 95% noncondensating.
 - c. The operating and non-operating altitude requirement is not invoked.
 - d. The EMI requirement is not invoked.
- 3.0 OPERATIONAL REQUIREMENTS
- 3.1 Input Channels: Two analog channels are required.
- 3.2 Chart Description: Two 40 mm (minimum) wide channels are required with 40 divisions (minimum) full scale and with time lines every 2 mm.
- 3.3 Chart Speeds: At least 4 selectable speeds to include 5, 25, 125, and 500 mm/sec are required.
- 3.4 Chart Speed Accuracy: The chart speed accuracy shall be $\pm 5\%$ plus power line frequency variations at all temperatures across the range.
- 3.5 Plug-in Preamplifiers: If plug-in preamplifiers are used, they shall be interchangeable without recalibration.
- 3.6 Input Ranges: The recorder shall provide at least 12 input ranges from 1.0 mV/div to 5.0 V/div in a 1, 2, 5 sequence with a continuous vernier between ranges.
- 3.7 Input Resistance: A 1 megohm (minimum) input resistance is required.
- 3.8 Maximum Allowable Input: The maximum allowable input voltage shall be at least 230 Vdc (or Vrms).
- 3.9 Common Mode Voltage: The common mode voltage shall be at least 250 Vdc or peak ac on 500 mV/div range and above.

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- 3.10 Event Marker/Timer: An event marker and a timer are required. Event markers shall be capable of being operated from the front panel or rear terminal via contact closure or TTL level. Timer marks shall be in uniform intervals of at least 1/sec, 6/min, 1/min, and 6/hour.
- 3.11 Frequency Response: For 10 divisions deflection, the frequency response shall be flat within $\pm 2\%$ to 100 Hz and a maximum of 3 dB down at 125 Hz.
- 3.12 Pen: The writing system shall produce a clear, concise trace at a maximum width of 0.5 mm. Either thermal printing or a fiber tipped pen may be used. At maximum chart speed, the resulting recording shall be a permanent, blot-proof, smudge-proof presentation of the data.
- 3.13 Paper Take Up: The recorder must have a paper take-up reel.
- 4.0 GENERAL SPECIFICATIONS.
- 4.1 Dimensions: 254 mm x 432 mm x 280 mm (10 in x 17 in x 11 in) nominal
- 4.2 Weight: 15.9 kg (35 lbs) nominal
- 4.3 Power: 115/230 Vac $\pm 10\%$, 50/60 Hz, 190 VA maximum
- 4.4 Calibration Interval: The calibration interval shall be at least 12 months minimum. The equipment shall be within all accuracy requirements specified herein, with a 72% or greater confidence factor following a calibration interval of 12 months.